

# Claims

[c1] What is claimed is:

1.A seal for a coaxial cable connector:

the coaxial cable connector comprising a tube with an upset portion at an end of the tube and a generally coaxial center conductor, the coaxial center conductor passing through the tube and the seal;

the seal contained within the upset portion of the tube, the seal comprising:

a first bead disposed within the upset portion;

a compliant tube adjacent the bead;

a second, packing bead adjacent the compliant tube;

an annular loading body adapted to engage the upset portion and adjacent the second packing bead;

wherein, upon insertion, the annular loading body compressing the second packing bead and the compliant tube between the loading body and the first bead such that the compliant tube plastically deforms and seals against the upset portion and the coaxial center conductor.

[c2] 2.The seal for a coaxial cable connector of claim 1, wherein the seal is pre-compressed to 25,000 psi.

- [c3] 3.The seal for a coaxial cable connector of claim 1 wherein the first bead has a tapered rounded edge to mate with a contour of the upset portion bottom.
- [c4] 4.The seal for a coaxial cable connector of claim 1 wherein the bead is constructed of ceramic.
- [c5] 5.The seal for a coaxial cable connector of claim 4 wherein the ceramic is selected from the group consisting of cemented tungsten carbide, alumina, silicon carbide, silicone nitride, and polycrystalline diamond.
- [c6] 6.The seal for a coaxial cable connector of claim 1 wherein the bead is constructed of metal.
- [c7] 7.The seal for a coaxial cable connector of claim 6 wherein the metal is selected from the group consisting of steel, titanium, chrome, nickel, aluminum, iron, copper, tin, and lead.
- [c8] 8.The seal for a coaxial cable connector of claim 7 wherein the steel is selected from the group consisting of viscount 44, D2, stainless steel, tool steel, and 4100 series steels.
- [c9] 9.The seal for a coaxial cable connector of claim 1 wherein the bead is constructed of a rigid plastic material.

- [c10] 10.The seal for a coaxial cable connector of claim 9 wherein the plastic material is selected from the group consisting of polyether ether ketones and polyether ketone ketones.
- [c11] 11.The seal for a coaxial cable connector of claim 1 wherein the compliant tube is made of Teflon.
- [c12] 12.The seal for a coaxial cable connector of claim 1 wherein an internal diameter of the compliant tube is smaller than an outer diameter of the coaxial center conductor.
- [c13] 13.The seal for a coaxial cable connector of claim 1 wherein the packing bead has a truncated tapered edge.
- [c14] 14.The seal for a coaxial cable connector of claim 1 wherein the packing bead is constructed of pyrophyllite.
- [c15] 15.The seal for a coaxial cable connector of claim 1 wherein the packing bead is constructed of polyether ether ketone and polyether ketone ketone.
- [c16] 16.The seal for a coaxial cable connector of claim 1 wherein the annular loading body has external circumferential barbs.
- [c17] 17.The seal for a coaxial cable connector of claim 1

wherein the annular loading body is constructed of is metal.

[c18] 18.The seal for a coaxial cable connector of claim 16 wherein the metal is selected from the group consisting of steel, titanium, chrome, nickel, aluminum, iron, copper, tin, and lead.

[c19] 19.The seal for a coaxial cable connector of claim 17 wherein the steel is selected from the group consisting of viscount 44, D2, stainless steel, tool steel, and 4100 series steels.